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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/675,622
Filing Date: September 30, 2003
Appellant(s): HUSSAIN, TASADDUQ

Robert C. Collins
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/23/07 appealing from the Office action mailed 8/15/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Gasmire (US Patent No. 3,065,501) and Ikeda (US Patent No. 5,817,348). Gatti ('177) teaches the basic claimed machine including an injection blow molding apparatus having a turret (10) with at least three planar surfaces (11), said turret being rotated in a counter clockwise direction such that at least one hollow core rod (12) installed on each of said planar surfaces is moved between an injection station (A), a blowing station (B) and a stripping station (C) (see col. 2, lines 14-32 and Figure 1). Further, Gatti ('177) teaches an apparatus for cooling of said hollow core rod including, a cooling manifold (32), inlet and outlet passages (33, 34), radial passages (35, 36) and transverse passages (30, 31) that communicate with the interior of said hollow core rod (12) such that cooling gas is circulated through said hollow rod core (means for circulating conditioned compressed gas).

Regarding claim 28, although Gatti ('177) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that

said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output, hence teaching that said controls (86,88) block passage of cooling air upon zero volume output (see col. 3, lines 37-40) (means for blocking circulation of compressed air from the means for conditioning the compressed air through the at least one core rod). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulated source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Gatti (' 177) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the pressure regulated source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described. Further regarding claim 28, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Gatti ('177) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al* ('804) in order to function as described.

Further regarding claim 28, Gatti ('177) in view of Martell *et al.* ('804) do not teach means for recompressing and reconditioning the exhausted cooling air. Gasmire ('501) teaches a cooling apparatus including recompressing and reconditioning means for recompressing and reconditioning exhausted cooling gas (see col. 6, lines 5-15). Therefore, it would have been obvious for one of ordinary skill in the art to have provided recompressing and reconditioning means as taught by Gasmire ('501) in the

apparatus of Gatti ('177) in view of Martell *et al.* ('804) because, Gasmire ('501) teaches that recompressing and reconditioning of the exhausted cooling gas provides for a more efficient cooling process, hence providing for an improved apparatus.

Further regarding claim 28, Gatti ('177) in view of Martell *et al.* ('804) and in further view of Gasmire ('501) do not teach means for blocking the exhaust system. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to the apparatus of Gatti ('177) in view of Martell *et al.* ('804) and in further view of Gasmire ('501) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

2. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Gasmire (US Patent No. 3,065,501) and Ikeda (US Patent No. 5,817,348). Farrell ('577) teaches the basic claimed machine including, an injection blow molding apparatus and a cooling apparatus having means for circulating a cooling gas within a hollow core rod (see col. 3, lines 22-45 and Figure 5). It is submitted that an injection blow molding apparatus includes a turret with at least three planar surfaces, said turret being rotated in a counter clockwise direction such that at least one hollow core rod installed on each of said planar surfaces is moved between an injection station, a blowing station and a stripping station.

Regarding claim 28, although Farrell ('577) teaches a cooling gas, Farrell ('577) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell et al. ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulated source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell et al. ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output, hence teaching that said controls (86,88) block passage of cooling air upon zero volume output (see col. 3, lines 37-40) (means for blocking circulation of compressed air from the means for conditioning the compressed air through the at least one core rod). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulated source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Farrell ('577) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the pressure regulated source of compressed air and cooling/conditioning means of Martell *et al* ('804) in order to function as described.

Further regarding claim 28, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Farrell ('577) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and

also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 28, Farrell ('577) in view of Martell *et al.* ('804) do not teach means for recompressing and reconditioning the exhausted cooling air. Gasmire ('501) teaches a cooling apparatus including recompressing and reconditioning means for recompressing and reconditioning exhausted cooling gas (see col. 6, lines 5-15). Therefore, it would have been obvious for one of ordinary skill in the art to have provided recompressing and reconditioning means as taught by Gasmire ('501) in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) because, Gasmire ('501) teaches that recompressing and reconditioning of the exhausted cooling gas provides for a more efficient cooling process, hence providing for an improved apparatus.

Further regarding claim 28, Farrell ('577) in view of Martell et al. ('804) and in further view of Gasmire ('501) does not teach means for blocking the exhaust system. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to the apparatus of Farrell ('577) in view of Martell et al ('804) and in further view of Gasmire ('501) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

3. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No.

5,817,348). Gatti ('177) teaches the basic claimed machine including an injection blow molding apparatus having a turret (10) with at least three planar surfaces (11), said turret being rotated in a counter clockwise direction such that at least one hollow core rod (12) installed on each of said planar surfaces is moved between an injection station (A), a blowing station (B) and a stripping station (C) (see col. 2, lines 14-32 and Figure 1). Further, Gatti ('177) teaches an apparatus for cooling of said hollow core rod including, a cooling manifold (32), inlet and outlet passages (33, 34), radial passages (35, 36) and transverse passages (30, 31) that communicate with the interior of said hollow core rod (12) such that cooling gas is circulated through said hollow rod core (means for circulating conditioned compressed gas).

Regarding claim 29, although Gatti ('177) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable Controls (86,88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Gatti ('177) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, Martell *et al* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Gatti ('177) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Gatti (' 177) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, although Gatti ('177) in view of Martell *et al.* ('804) teach controls that block passage of cooling air upon zero volume output (see col. 3, lines 37-40 of Martell *et al.* ('804)), Gatti (' 177) in view of Martell *et al.* ('804) do not teach separate means for blocking circulation of compressed air from the means for conditioning the compressed air. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to block circulation of compressed air from the means for conditioning the compressed air in the apparatus of Gatti ('177) in view of Martell *et al.* ('804) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348). Farrell ('577) teaches the basic claimed machine including, an injection blow molding

apparatus and a cooling apparatus having means for circulating a cooling gas within a hollow core rod (see col. 3, lines 22-45 and Figure 5). It is submitted that an injection blow molding apparatus includes a turret with at least three planar surfaces, said turret being rotated in a counter clockwise direction such that at least one hollow core rod installed on each of said planar surfaces is moved between an injection station, a blowing station and a stripping station.

Regarding claim 29, although Farrell ('577) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Farrell ('577) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.*

('804) in the apparatus of Farrell ('577) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, although Farrell ('577) in view of Martell *et al.* ('804) teach controls that block passage of cooling air upon zero volume output (see col. 3, lines 37-40 of Martell *et al.* ('804)), Farrell ('577) in view of Martell *et al* ('804) do not teach separate means for blocking circulation of compressed air from the means for conditioning the compressed air. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to block circulation of compressed air from the means for conditioning the compressed air in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

(10) Response to Argument

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding the argument that Gatti does not teach blocking of coolant circulation (page 7 of Appeal Brief) and/or that Farrell does not teach blocking of circulation of coolant (page 11), it is not the position of the Examiner that Gatti or Farrell teach such blocking. Rather, as can be seen above, Martell et al is utilized to teach blocking the "passage of cooling air upon zero volume output (see col. 3, lines 37-40)".

Regarding the argument that the secondary references do not relate to cooling mechanisms in a molding machine (page 13 of Appeal Brief), Martell et al. teach an apparatus for cooling an injection molding tool (18), including a conditioning/cooling unit (58); and Gasmire teaches an apparatus for blowing and cooling a plastic article in a blow molding machine. Ikeda is not being utilized to teach cooling, so this argument does not apply to Ikeda.

Regarding the argument that Ikeda is not combinable with Gatti, Farrell, or Martell et al. (page 8), Ikeda teaches a blow-molding apparatus that includes an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see column 5, line 44-column 6, line 32, and see Fig. 1). Gatti and Farrell both teach core rods for blow molding machines, which is exactly the machine taught by Ikeda. Ikeda, Gatti, Farrell, and Gasmire are all blow molding machines and, as such, are in the same field of endeavor. Further, Ikeda is not utilized to modify Martell et al. However, Martell et al. is concerned with molding a plastic about a core rod, which also occurs in blow molding.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Suzanne E. McDowell

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